

REMARKS/ARGUMENTS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the following remarks.

The Applicants originally submitted Claims 1-23 in the application. Previously, the Applicants withdrew Claims 11-13 in response to an Election Requirement. Presently, the Applicants have not amended, canceled nor added any claims. Accordingly, Claims 1-10 and 14-23 are currently pending in the application.

I. Rejection of Claims 1, 2, 9, 14, 15 and 22 under 35 U.S.C. §103

The Examiner has rejected Claims 1, 2, 9, 14, 15 and 22 under 35 U.S.C. §103(1) as being unpatentable over U.S. Patent No 6,326,291 to Yu ("Yu"). Independent Claims 1 and 14 include the element, among others, of siliciding source/drain regions after siliciding the polysilicon gate electrode. Yu fails to teach or suggest this element.

The Examiner, in his/her Examiner's Action dated March 27, 2006, concedes that Yu fails to disclose the order of forming the silicided polysilicon gate electrode **240** before its silicided source/drain regions **220, 222**. However, the Examiner argues that it would have been obvious to one of ordinary skill in the art to change the sequence of the process as disclosed by Yu. The Examiner's argument fails for a number of reasons.

First, the Examiner has provided nothing more than a conclusory statement that one skilled in the art would change the sequence of the processes taught by Yu. The Examiner is required to

provide, and the Applicants deserve, more than just this conclusory statement to establish this supposed obvious reversal of processing steps. The Examiner has not provided any additional comments, arguments or otherwise, and thus has failed to meet his/her burden of establishing a prima facie case of obviousness.

Second, nothing in Yu mentions, suggests or even hints that it would be acceptable to reverse the order of formation of its silicided polysilicon gate electrode 240 and silicided source/drain regions 220, 222. To the contrary, Yu goes into great detail to specifically discuss, show and claim how the silicided source/drain regions 220, 222 are formed prior to the silicided polysilicon gate electrode 240. Yu specifically devotes at least 13 paragraphs and 8 Figures to a process for forming silicided source/drain regions 220, 222 prior to forming its silicided polysilicon gate electrode 240. In those 17 paragraphs and 8 Figures that separate the formation of the silicided source/drain regions 220, 222 and silicided polysilicon gate electrode 240 in Yu, many different processing steps occur. Yu goes so far to say that "the capping layer 216 prevents formation of any metal silicide in the polysilicon gate structure 212 during formation of the drain silicide 220 in the drain region 202 and the source silicide 222 in the source region 204." (Yu at Column 5, lines 19-24). According to this requirement, why even use the capping layer 216 if the polysilicon gate structure 212 was already a silicided structure, as the Examiner is arguing is obvious. Moreover, Yu also requires, according to its own independent Claim 1, that a first silicidation anneal is conducted to form drain and source silicides, and that a second silicidation anneal is conducted to form a gate silicide. Clearly then, Yu's own independent Claim requires that the drain and source silicides are formed prior to the gate silicided. Accordingly, each of the specification and claims of Yu requires

that the silicided source/drain regions **220, 222** are formed prior to the silicided polysilicon gate electrode **240**, and thus one skilled in the art would not reverse such a process.

Third, without strong motivation otherwise, one skilled in the art would not be motivated to randomly reverse the specific order of forming the and silicided source/drain regions **220, 222** taught by Yu. Those skilled in the art understand that processes known to work are seldom, if ever, modified just for the sake of modification. Thus, unless something were to motivate the reversal of the processing steps, and no such motivation exists in Yu or anything else the Examiner has provided, those skilled in the art would not randomly take such a step.

Thus, Yu fails to teach or suggest the invention recited in independent Claims 1 and 14 and their dependent claims, when considered as a whole. Yu, accordingly, also fails to establish a prima facie case of obviousness with respect to these claims. Claims 1, 2, 9, 14, 15 and 22 are therefore not obvious in view of Yu.

In view of the foregoing remarks, the cited reference does not support the Examiner's rejection of Claims 1, 2, 9, 14, 15 and 22 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

II. Rejection of Claims 3, 4, 5, 16, 17 and 18 under 35 U.S.C. §103

The Examiner has rejected Claims 3, 4, 5, 16, 17 and 18 under 35 U.S.C. §103(a) as being unpatentable over Yu in view of U.S. Patent No. 6,794,313 to Chang ("Chang"). As previously indicated, independent Claims 1 and 14 include the element, among others, of siliciding source/drain regions after siliciding the polysilicon gate electrode. As previously established, Yu fails to teach or suggest such an element.

Chang fails to correct the deficiencies in Yu. The Examiner is offering Chang for the sole proposition that a silicided blocking layer may be grown using a dry oxidation process, low temperature radical oxidation or plasma oxidation process, as well as the thickness of the blocking layers. Without even addressing the accuracy of this assertion, a teaching that a silicided blocking layer may be grown using a dry oxidation process, low temperature radical oxidation or plasma oxidation process, as well as the thickness of the blocking layers, is very different from a teaching or suggestion of siliciding source/drain regions after siliciding the polysilicon gate electrode, as is claimed. Accordingly, Chang also fails to teach or suggest this claimed element.

Thus, Yu, individually or in combination with Chang, fails to teach or suggest the invention recited in independent Claims 1 and 14 and their dependent claims, when considered as a whole. The combination, accordingly, also fails to establish a *prima facie* case of obviousness with respect to these claims. Claims 3, 4, 5, 16, 17 and 18 are therefore not obvious in view of Yu and Chang.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 3, 4, 5, 16, 17 and 18 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

III. Rejection of Claims 6 and 19 under 35 U.S.C. §103

The Examiner has rejected Claims 6 and 19 under 35 U.S.C. §103(a) as being unpatentable over Yu in view of U.S. Patent App. No. 2005/0179098 to Chan, *et al.* ("Chan"). As previously indicated, independent Claims 1 and 14 include the element, among others, of siliciding source/drain regions after siliciding the polysilicon gate electrode. As previously established, Yu fails to teach or suggest this element.

Chan fails to correct the deficiencies in Yu. The Examiner is offering Chan for the sole proposition that a hardmask layer comprising siliconoxynitride may be used as a protective layer. Without even addressing the accuracy of this assertion, a teaching that a hardmask layer comprising siliconoxynitride may be used as a protective layer, is very different from a teaching or suggestion of siliciding source/drain regions after siliciding the polysilicon gate electrode, as is claimed. Accordingly, Chan also fails to teach or suggest this claimed element.

Thus, Yu, individually or in combination with Chan, fails to teach or suggest the invention recited in independent Claims 1 and 14 and their dependent claims, when considered as a whole. The combination, accordingly, also fails to establish a *prima facie* case of obviousness with respect to these claims. Claims 6 and 19 are therefore not obvious in view of Yu and Chan.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 6 and 19 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

IV. Rejection of Claims 7, 8, 20 and 21 under 35 U.S.C. §103

The Examiner has rejected Claims 7, 8, 20 and 21 under 35 U.S.C. §103(a) as being unpatentable over Yu in view Chan, and further in view of U.S. Patent App. No. 2001/0034129 to Moore, *et al.* ("Moore"). As previously indicated, independent Claims 1 and 14 include the element, among others, of siliciding source/drain regions after siliciding the polysilicon gate electrode. As previously established, Yu and Chan, alone or in combination, fail to teach or suggest this element.

Moore fails to correct the deficiencies of Yu and/or Chan. The Examiner is offering Moore for the sole proposition that the sidewall spacer may comprise a nitride, the different nitride composition of the spacer and the protective layer, and the nitride carbon content of 5-10%. Without even addressing the accuracy of this assertion, a teaching that the sidewall spacer may comprise a nitride, the different nitride composition of the spacer and the protective layer, and the nitride carbon content of 5-10%, is very different from a teaching or suggestion of siliciding source/drain regions after siliciding the polysilicon gate electrode, as is claimed. Accordingly, Moore also fails to teach or suggest this claimed element.

Thus, Yu, individually or in combination with Chan and Moore, fails to teach or suggest the invention recited in independent Claims 1 and 14 and their dependent claims, when considered as a whole. The combination, accordingly, also fails to establish a prima facie case of obviousness with respect to these claims. Claims 7, 8, 20 and 21 are therefore not obvious in view of Yu, Chan and Moore.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 7, 8, 20 and 21 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

V. Rejection of Claims 10 and 23 under 35 U.S.C. §103

The Examiner has rejected Claims 10 and 23 under 35 U.S.C. §103(a) as being unpatentable over Yu in view of Chan. As previously indicated, independent Claims 1 and 14 include the element, among others, of siliciding source/drain regions after siliciding the polysilicon gate electrode. As previously established, Yu and Chan, whether alone or in combination, fail to teach or suggest this element. Claims 10 and 23 are therefore not obvious in view of Yu and Chan.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 10 and 23 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

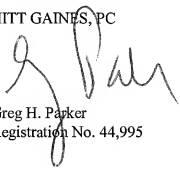
VI. Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-10 and 14-23.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 20-0668.

Respectfully submitted,

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Dated: June 27, 2006

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